REMARKS

(1) Claims 1-19 are pending in this application. Claim 3 has been written into independent form including all the limitations of claim 1. Claims 9-16 are withdrawn from consideration.

(2) Claims 1-8 and 17-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over

Soane et al. (U.S. Patent No. 6,379,753) in view of Hirano et al. (JP 2000-017572).

(i) The Examiner states that "[i]n preferred embodiment, a graft copolymer is

provided that consists of a hydrophilic backbone with hydrophobic polymer grafts," page 6, lines

7-9 of the outstanding Office Action. Since Soane et al. teach not a hydrophilic treatment, but a

hydrophobic treatment of fiber or cellulose, Soane et al. cannot be combined with Hirano because

of teaching away.

Soane et al. teach modifying textile to impart water repellency (col. 1, lines 19-20).

Soane et al. further teach modifying a variety of textile fiber materials to improve "water

repellency," "grease repellency," and "detergent free washing" (col. 5, line 1-3). Soane et al.

disclose that "the hydrophobic groups are covelently attached (col. 10, lines 10-11)." Soane et al.

teach improving water resistance and increasing the hydrophobicity (col. 4, lines 49-50; col. 5,

lines 8-9). The improvement of the "water repellency" is obtained by the hydrophobic treatment.

- 6 -

Amendment under 37 C.F.R. § 1.116

Application No. 10/564,091

Attorney Docket No. 053482

Although the Examiner states at page 6 of the Office Action that "The graft

copolymer is applied to the materials, such as cotton fabric (a hydrophilic surface) to produce a

durable hydrophilic coating (col. 13, lines 4-6)," the durable hydrophilic coating with

hydrophobic polymer grafts must be less hydrophilic than the original polymer before the

Soane's treatment gives hydrophobic polymer graphs to the fabric. Soane et al. teach

"multifunctional polymers" including hydrophobic groups and hydrophilic groups (col. 12, lines

39-41), but Soane et al. further teach that these multifunctional polymers are used to form

hydrophobic water repellent coatings (col. 12, lines 42-44). Thus, Soane et al. teach modifying

the hydrophilic fiber backbone with hydrophobic polymer grafts (col. 13, lines 2-7). Thus, Soane

et al. teach not a hydrophilic treatment but a hydrophobic treatment of fiber or cellulose.

On the contrary, Hirano et al. teach a hydrophilicization treatment of cellulose

(Abstract). The teaching by Hirano et al. brings the effects opposite to the Soane's hydrophobic

treatment of fiber or cellulose.

The Examiner states that "it would have been obvious to one of ordinary skill in

the art at the time of the invention to incorporate the hydrophilicization treatment as taught by

Hirano in the method as disclosed by Soane et al. in order to further enhance the final fiber

products with an anti-yellowing function." Page 7 of the outstanding Office Action. The

Examiner seems to consider that the Hirano's treatment can be further applied after carrying out

the Soane's treatment. However, doing so will undermine the effects obtained by Soane et al.

- 7 -

Amendment under 37 C.F.R. § 1.116

Application No. 10/564,091

Attorney Docket No. 053482

One skilled in the art does not do so. "There must be some articulated reasoning with some

rational underpinning to support the legal conclusion of obviousness." KSR International v.

Teleflex, 127 S.Ct 1727, 1741 (2006). Since Soane et al. teach a hydrophobic treatment whereas

Hirano et al. teach a hydrophilicization treatment, the Examiner's legal conclusion of

obviousness is not rationally supported by articulated reasoning.

(iii) Moreover, Hirano teaches providing cellulose with an anti-yellowing function by

the hydrophilicization treatment, which can be accomplished by increasing the moisture

absorption of cellulose by 110% or more, compared with the raw material. See paragraphs

[0016]-[0017] of Hirano et al. On the contrary, the method by Soane et al. makes the fiber or

cellulose impart water repellency (col. 1, line 20). It is unpredictable if fiber or cellulose, treated

by Soane et al., can be then treated by Hirano et al. to increase the moisture absorption of

cellulose by 110% or more, compared with the raw material, in order to give an anti-yellowing

function. The treatment by Soane et al. reduces the moisture absorption of the cellulose. Hirano

et al. teach treating cellulose which itself is hydrophilic, but Hirano et al. do not teach

hydrophilic treatment for fiber or cellulose whose hydrophilic feature is reduced or deteriorated.

Namely, it is unpredictable if the Hirano's teaching can work on the fiber which is made

hydrophobic in advance in accordance with Soana et al. Thus, claims 1, 3 and 17 are not

obvious over the cited references.

-8-

Amendment under 37 C.F.R. § 1.116

Application No. 10/564,091

Attorney Docket No. 053482

Claim 3 further recites that "the moisture absorption ratio of the cellulose fiber is (iv)

adjusted to be 7.1% or higher by the hydrophilization treatment." Claim 17 has a similar

limitation. Since Soane et al. teach hydrophobic treatment, so that the cellulose treated by Soane

et al. does not meet the claimed requirement.

In view of above, Applicants submit that that the claims, as herein amended, are in (3)

condition for allowance. Applicants request such action at an early date. If the Examiner

believes that this application is not now in condition for allowance, the Examiner is requested to

contact Applicants' undersigned representative at the telephone number indicated below to

arrange for an interview to expedite the disposition of this case. If this paper is not timely filed,

Applicants respectfully petition for an appropriate extension of time. The fees for such an

extension or any other fees that may be due with respect to this paper may be charged to Deposit

Account No. 50-2866.

Respectfully submitted,

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-9-